



**Project name:** Solar Panel Project

**Transit agency:**

Delaware Transit Corporation

**Location:** Wilmington, Delaware

**TIGGER goal:** Energy reduction

**FTA region number:** III

**Award amount:** \$1,500,000

**Congressional district:** DE-1

**Funding mechanism:**

Recovery Act (ARRA)

## Solar Panels Bring Energy, Emissions Savings to DTC

Two Delaware Transit Corporation (DTC) facilities are being retrofitted with solar photovoltaic (PV) systems under a \$1.5 million TIGGER project. These solar panel installations will generate cost savings for DTC and reduce greenhouse gas emissions by reducing the amount of fossil-fuel-generated electricity purchased from the grid.

At the Dover Administration Building in Dover, DTC is installing a 181.4 kilowatt (kW) direct current (DC) PV system that will produce 221,271 kilowatt-hours (kWh) of electricity annually. This power source will supply 21% of the building's annual usage. Additionally, the Wilmington Paratransit Maintenance Garage in Wilmington will gain a 158.4-kW DC PV system, capable of generating 194,601 kWh of electricity annually. The system will meet 91.2% of the building's annual electricity usage.



**Delaware Transit Corporation (DTC)** operates the DART First State transit agency. DART First State provides transportation services in Delaware with more than 400 buses and 57 year-round bus routes. It also runs the Sussex County Resort Summer Service and paratransit service. DART provides New Castle County with commuter rail service to and from Philadelphia. The agency, which has evolved over 130 years, aims for the highest quality of service.

Photo courtesy of NREL, PIX #18826



A key benefit will be to cut DTC's greenhouse gas (GHG) emissions. By reducing the amount of purchased electricity generated from fossil fuel, the project will avoid approximately 367,000 pounds of carbon dioxide (CO<sub>2</sub>) emissions. The expected yearly pollution reduction is equivalent to removing about 32 passenger vehicles from highways. This embrace of renewable energy will help DTC meet its own goals to go greener and protect the environment, and will support national clean air targets.

The project also creates cost savings for the transit agency because energy consumption cost is expected to drop \$47,000 per year. Further, DTC can recoup additional revenue by selling renewable energy credits for the PV electricity generated. The system, installed by New Jersey-based Ray Angelini, Inc., carries a 15-year warranty and has an expected useful life of 20 to 25 years.

Both of the DTC sites are high-profile, which means the PV project will serve as a model for future installations at other transit agencies. Additionally, DTC will share its experiences with transportation officials, creating momentum for other such efforts.

### **Impact:**

By adding solar power to its facility, DTC expects to reduce pollution equivalent to removing 32 cars from the road.

### **About TIGGER**

**The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program** was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial \$100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional \$75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional \$49.9 million to continue the program.

### **For More Information**

DTC:

[www.dartfirststate.com](http://www.dartfirststate.com)

FTA TIGGER:

[www.fta.dot.gov/TIGGER](http://www.fta.dot.gov/TIGGER)



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